



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,222	02/22/2002	Takashi Shoji	016778-0445	1820
22428	7590	11/29/2005	EXAMINER	
FOLEY AND LARDNER LLP			MEEK, JACOB M	
SUITE 500			ART UNIT	
3000 K STREET NW			PAPER NUMBER	
WASHINGTON, DC 20007			2637	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/069,222	SHOJI, TAKASHI	
	Examiner	Art Unit	
	Jacob Meek	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5,9 and 13-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 9 is/are allowed.
- 6) ☒ Claim(s) 13- 16, 19, 21,22 is/are rejected.
- 7) ☒ Claim(s) 17,18 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see pages 8 - 15, filed 9/8/2005, with respect to claims 5 and 9 have been fully considered and are persuasive. The rejection of claims 5 and 9 has been withdrawn.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13 – 16, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umeda et al (US-5,568,472) in view of Keeth et al (US-6,101,197).

With regard to claim 13, Umeda discloses a transmission circuit comprising: a plurality of 1<sup>st</sup> timing adjusting circuits (see figure 13, 221 – 22n), each 1<sup>st</sup> timing adjusting circuit of plurality of timing adjusting circuits configured to: (i) input a corresponding spread signal of a plurality of spread signals (see figure 1, 211 – 21n), (ii) delay corresponding spread signal by 1<sup>st</sup> delay quantity (see column 11, lines 10 – 20), and (iii) output corresponding 1<sup>st</sup> timing signal of plurality of timing signals (see figure 13, 221 – 22n connections to 233), plurality of 1<sup>st</sup> timing adjustment circuits having a first resolution for specifying 1<sup>st</sup> delay stage quantity (see column 11, lines 10 - 20); and a synthesizer for synthesizing a plurality of output timing signals (see figure 13, 234 where this is interpreted as equivalent). Umeda is silent with respect to 2<sup>nd</sup> timing adjustment circuits but does disclose the need (and ability) for making

Art Unit: 2637

arbitrary timing adjustments (see column 11, 21 – 34). Keeth discloses a delay adjusting circuit providing coarse and fine adjustments for the adjustment of data alignment (see figure 3, 158 and 154). It would have been obvious to one of ordinary skill in the art at the time of invention to provide coarse and fine capabilities in order to be able to accurately control signal phase (see column 4, lines 56 – 66). Umeda discloses a transmitter (see figure 13, 234 which is interpreted as including a modulator) but is silent with respect to transmission filter construction. It would have been obvious to one of ordinary skill in the art at the time of invention to provide a transmit filter for the shaping of output signal for control of output spectrum.

With regard to claim 14, Umeda is silent with respect to 2<sup>nd</sup> resolution and oversampling. Keeth discloses a delay adjusting circuit providing coarse and fine adjustments (see figure 3, 158 and 154). It would have been obvious to one of ordinary skill in the art at the time of invention to provide coarse and fine capabilities in order to be able to accurately set signal phase (see column 4, lines 56 – 66). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the same clock rate to reduce the number of clock generators in the system in order to reduce complexity and cost.

With regard to claim 15, Umeda is silent with respect to synthesizer and modulators. Umeda discloses a transmitting circuit (see figure 13, 234) of which transmitter is known to include a synthesizer and modulator and would have been obvious to one of ordinary skill in the art at the time of invention.

With regard to claim 16, Umeda discloses a plurality of multipliers (see figure 13, 211 – 21n) configured to multiply corresponding information sequence by plurality of spread codes. Umeda discloses a variety of embodiments showing PN generators with multiple outputs (see figures 7, reference 110 & figure 13, reference 210), but is silent with respect to multiple

spreading codes. Multiple spreading codes are known to be used for the spreading of different signals and therefore would have been obvious to one of ordinary skill in the art at the time of invention.

With regard to claim 19, Umeda discloses the ability for the adjustment of delay timings (see column 11, 21 – 34), which is interpreted as equivalent functionality and therefore obvious to one of ordinary skill in the art at the time of invention.

With regard to claim 21, while not identically structured to claim 13 the elements claimed are identical and the rearrangement thereof would have been obvious to one of ordinary skill in the art given the aforementioned rejection of claim 13. Further, Umeda discloses a variety of embodiments for the implementation of his system.

With regard to claim 22, while not identically structured to claim 13 the elements claimed are identical and the rearrangement thereof would have been obvious to one of ordinary skill in the art given the aforementioned rejection of claim 13. Further, Umeda discloses a variety of embodiments for the implementation of his system.

### ***Allowable Subject Matter***

3. Claims 5 and 9 are allowed.
4. Claims 17, 18 and 20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is a statement of reasons for the indication of allowable subject matter: The combination of elements and functionality does not appear to be anticipated or rendered obvious by prior art.

***Other Cited Prior Art***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Saito (US-5,914,947) discloses an apparatus with many of the functional elements disclosed by applicant.

Philips et al (US-6,307,877) discloses an apparatus with many of the functional elements disclosed by applicant.

Keegan (US-4,805,195) discloses an apparatus, which provides coarse and fine delay adjustments as a 2 stage process.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Art Unit: 2637

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM  
11/22/05



TEMESGHEH GHEBRETINSAE  
PRIMARY EXAMINER  
11/28/05  
JK